

Minnesota Energy Code & IAQ

Don Sivigny

State of Minnesota

Building Code Representative

Energy Specialist

QUALITY INDOOR AIR

Is quality indoor air
a concern to the
average homeowner
or building
occupant?

Yes

**Quality indoor air is or should be
a concern to not only the
occupants, but to builders,
building officials and design
professionals like.**

INDOOR AIR QUALITY

**The E.P.A. lists indoor air
quality as the 4th largest
environmental threat to our
country**

**People spend two-thirds of their lives
in their homes. And 90% of their life
indoors**

**So indoor air quality is very important
for the health and well-being of
building occupants and the building
alike**

INDOOR AIR QUALITY

Poor indoor air quality can result in structural rot in walls, attics and around fenestration products.

As well as a health concern for the occupants

**What do most homeowners do to
address their own indoor air
quality?**





GLADE 01/01/01 PC
PLUG-INS

\$3.19 PER EA

PLUG-INS 06/11/01 DC
MARK

\$3.19 PER EA





Why do we need to be so concerned with quality indoor air today? We never used to worry about it at all.

**Building envelope components,
appliances and lifestyles of the
occupants have changed**

**So Buildings and their construction
have changed.**

BUT WHY?

Why have buildings changed?

Occupant expectations

- Temperature & Humidity
- No drafts
- Energy Efficiency
- High exhaust appliances

Houses must be built tight

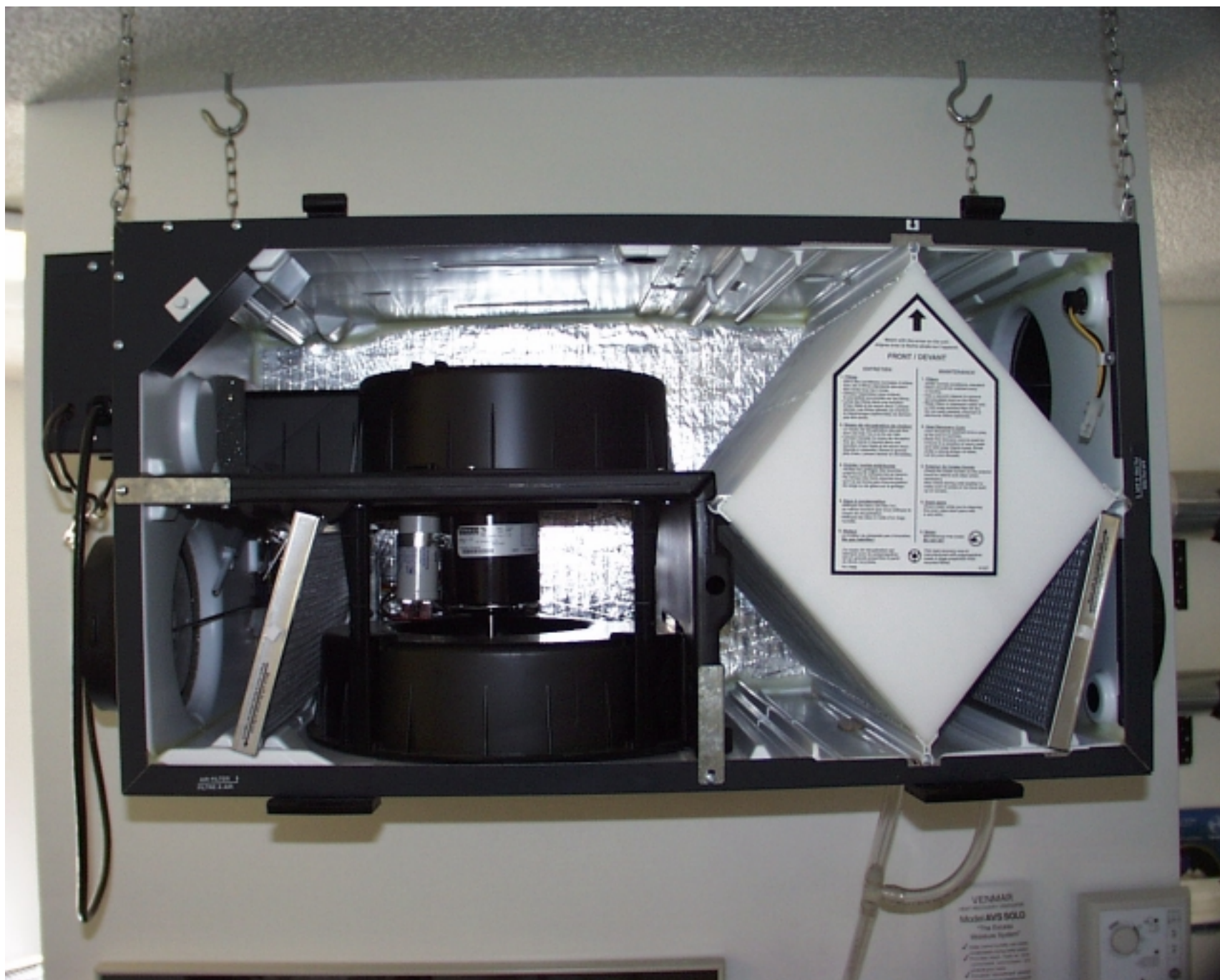


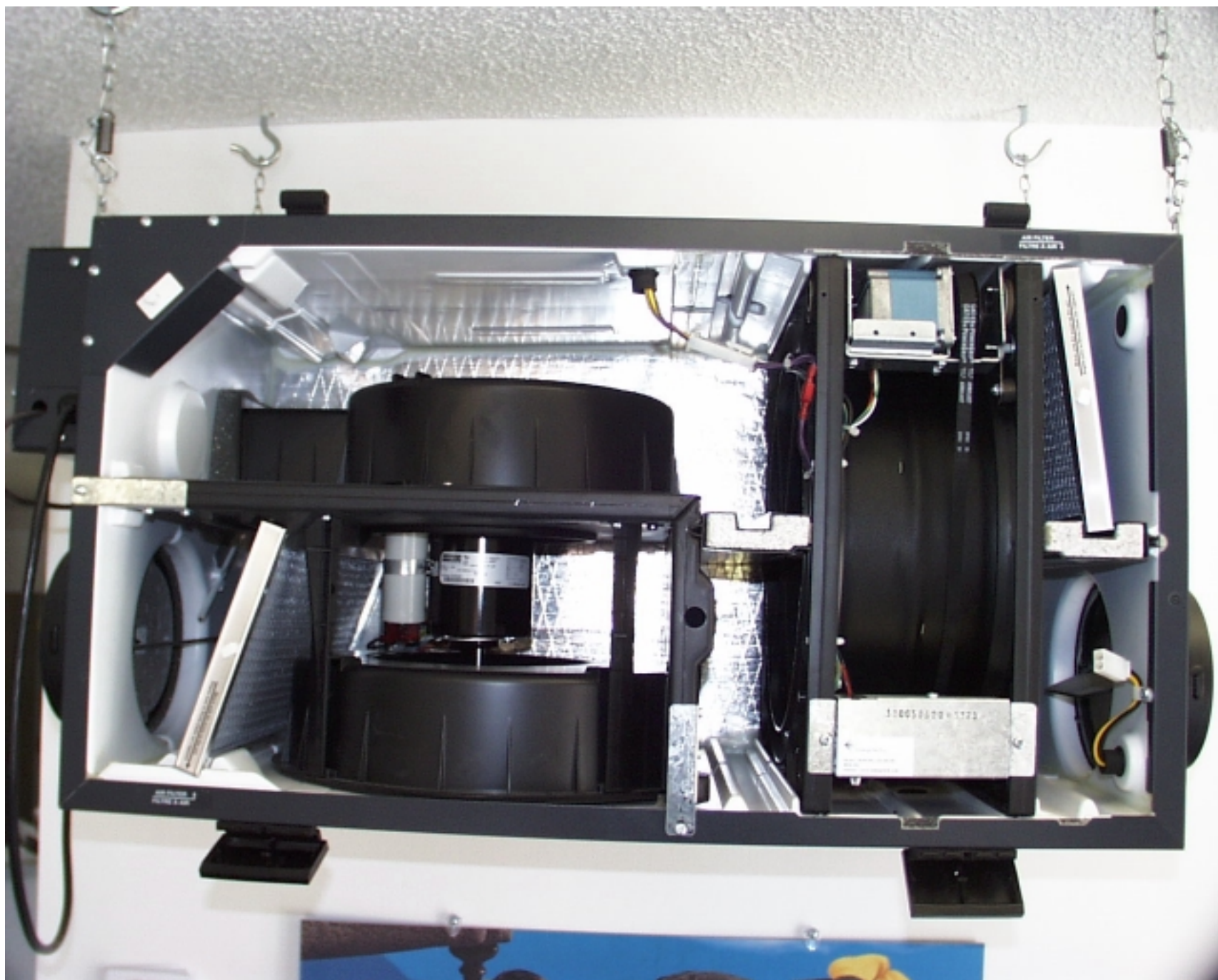
and ventilated right



A well sealed, well insulated,
mechanically ventilated home is
essential for comfort, building
durability, and energy efficiency....

If installed and maintained properly













The 2000 Minnesota Legislature Gave Two Options for Energy Code Compliance



- Build to Option A
(Chapter 7670)
- Build to Option B
(Chapter 7672)
- Which one should we
build to? Is one better
than the other?

How much will the choice made
cost?



Cost Elements

- Savings on callbacks may offset the additional costs of air tightness, ventilation, and protection against excessive depressurization.

Common Callbacks in Residential Buildings

- Ice Dams
- Freezing pipes
- High heating and cooling bills
- Indoor air quality
- Attic moisture problems
- Severe window condensation
- Backdrafting of combustion equipment
- Smelly fireplaces
- Drafts

IN SUMMARY

**Build a tight energy efficient home
that has a properly installed and
maintained ventilation system.**

&

**Protect against excessive
depressurization.**

To do this **WE** need to provide good information and education to builders, owners and design professionals alike

And **THEY** need to spend time on the front end of a project to design a quality energy efficient and safe building to live in

**AND THEN BUILD TO THE
DESIGN**